

REMARKS/ARGUMENTS

Claim 1 has been amended to delete redundant language. No other amendments are presented with this response. Applicants respectfully request reconsideration of the rejection for the reasons given below.

Rejection Under 35 U.S.C. §103

Claims 1-26 have been rejected as unpatentable over the combined teaching of U.S. Patent 6,159,657 (Fleming et al.) with EP 1,114,734 (Sumita et al.). This rejection is respectfully traversed.

The Office Action alleges that Fleming et al. discloses a composition comprising a copolymer with various recurring units containing organoonium moieties. The resulting composition can be used in a printing plate for on-press imaging and printing. The Office Action alleges that Fleming et al. also broadly teaches monomers without the organoonium moieties. However, the Office Action tacitly admits that Fleming et al. fails to teach or suggest IR absorbing copolymers.

Sumita et al. is cited for its generic teaching of various acrylic comonomers that can be polymerized to form copolymers.

The Office Action summarizes its arguments with an unsupported opinion that it would be obvious to one of ordinary skill in the art to prepare the material of Fleming et al. by choosing to employ the monomers of Sumita et al. to increase durability and ink absorption with a reasonable expectation of achieving a material having increased IR sensitivity.

Applicants' Invention:

The reasons for Applicants' traversal are presented below after a brief description of the claimed invention.

The presently claimed invention is directed to a copolymer that is an infrared absorbing compound. This copolymer can serve as both a binder and the IR absorbing component of the imaging layer. However, optional co-binders can also be included. Applicants' Claim 1 outlines the structural and compositional features of the IR absorbing copolymer. The moiety D^θ is defined as part of the "M" unit and as being an infrared absorbing cyanine or oxonol

anion. This moiety gives the resulting copolymer the IR absorbing properties required for the invention. These IR absorbing moieties also include sulfonate or sulfate groups.

Applicants' invention also includes imageable elements containing the IR absorbing compounds (i.e. IR absorbing copolymers) as well as methods of using these elements.

Applicants have found that the claimed IR absorbing copolymers are useful in on-press developable imageable elements and thus conventional high pH or solvent-based developers are not necessary. A separate development step is avoided, thereby reducing imaging and printing costs, maintenance, and adverse environmental effects.

Response to the Rejection:

The unpatentability rejection over Fleming et al. and Sumita et al. is in error. The statements in the Office Action notwithstanding, there is no reasoning given for why the combined generic teaching of copolymers in the two references would teach or suggest specific copolymers that are IR absorbing compounds. Nothing in the teaching in Fleming et al. suggests comonomers with IR absorbing moieties. In fact, Fleming et al. clearly requires a separate IR absorbing compound (e.g. IR dye, Col. 5, lines 47-49) used in combination with the charged heat-sensitive copolymer containing the organoonium moieties. Nothing in Fleming et al. suggests that the charged copolymers themselves are to be made IR absorbing.

Sumita et al. clearly fails to overcome this deficiency in Fleming et al. Sumita et al. is directed to ink jet compositions containing cationic copolymers and optionally powders and pigments [0414] but there is no indication that either the copolymers or powders are IR absorbing.

Thus, a combination of the teachings from the two references merely suggests the use of cationic heat-sensitive copolymers with separate IR dyes and/or powders and pigments. This is clearly not Applicants' claimed invention where the IR absorbing compound is the copolymer itself and can be used alone if desired. No separate IR absorbing dye is used with Applicants' IR absorbing copolymer because the copolymer performs that function.

For these reasons, the rejection over Fleming et al. and Sumita et al. is in error and should be withdrawn.

In view of the foregoing amendments and remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the examiner is earnestly solicited.

Respectfully submitted,



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